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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,403	07/26/2006	Hiroshi Yamada	10993.0274-00000	7054

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EXAMINER	
EOFF, ANCA	

ART UNIT	PAPER NUMBER
1795	

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06/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,403	YAMADA ET AL.	
	Examiner	Art Unit	
	ANCA EOFF	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 12-23 are pending. Claims 1-11 have been cancelled.

2. The foreign priority document JP 2004-018472 filed on January 27, 2004 was received and acknowledged. However, in order to benefit of the earlier filing date, a certified English translation is required.

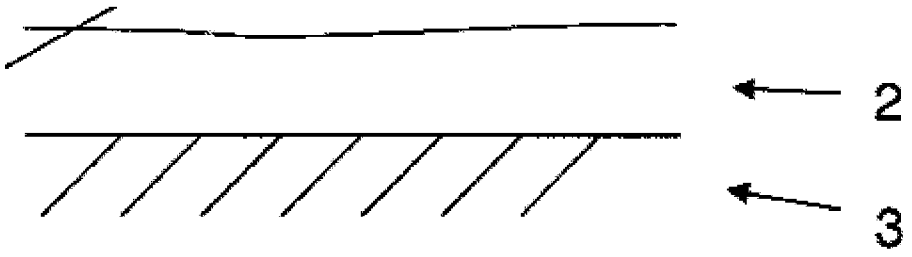
Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Husemann et al. (US Patent 6,512,022).

With regard to claim 23, Husemann et al. teach a backing (3) having an acrylic composition (2) deposited thereon (column 4, lines 56-57). The acrylic composition crosslinks with UV radiation (abstract).



(fig 1)

The tan δ has a maximum around 1.4 in the temperature range of -50°C to 0°C (see fig.2).

The backing (3) of Husemann et al. is equivalent to the substrate of the instant application and the acrylic composition (2) of Husemann et al. which cured under UV radiation is equivalent to the photo-cured photosensitive resin of the instant application.

The fact that the substrate of the instant application is a "laser engravable printing substrate" is only an intended use and adds no patentable weight to the claim. Therefore, the backing (3) having the cured acrylic composition of Husemann et al. is equivalent to the laser engravable printing substrate of the instant application.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 12-18, 19-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannurpatti et al. (US Pg-Pub 2002/0123003) in view of Yatsunagi et al. (US Patent 5,362,604).

With regard to claims 12 and 13, Kannurpatti et al. teach a laser engravable flexographic printing element comprising on a support a laser engravable reinforced elastomeric layer (abstract).

The support may be in sheet form or in cylindrical form (par.0027).

The elastomeric layer comprises an elastomeric binder, at least one monomer and an photoinitiator system (abstract) so it is equivalent to the photosensitive composition layer of the instant application.

The elastomeric layer is generally pressed on the support (par.0030), equivalent to the step of “forming a photosensitive composition layer on a support" of the instant application.

Kannurpatti et al. further teach that the elastomeric composition is reinforced by overall exposure to actinic radiation, such as UV radiation to effect photohardening (par.0031). This step is equivalent to the step of “applying light to the formed photosensitive composition layer to form a cured photosensitive resin layer” of the instant application.

After photohardening the elastomeric element, the printing element is engraved with laser radiation, which involves removal of material in three dimensions (par.0032). This step is equivalent to the step of “adjusting the thickness of the cured photosensitive resin layer and shaping a surface of the cured photosensitive resin layer” of the instant application.

For the photohardening/curing step, Kannurpatti et al. teach that UV radiation may be used (par.0031) and UV radiation encompasses the range of 200-450 nm of the instant application.

However, Kannurpatti et al. but fail to specifically teach the light of the instant application.

Yatsuyanagi et al. teach a photosensitive composition suitable for production of flexographic printing plates (abstract). For the production of flexographic printing plates, films of photosensitive composition are formed by pressing on a substrate and they are over-all exposed to UV light at 4,000 mJ/cm^2 to convert them to cured films (column 12, lines 8-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a source of UV light at 4,000 mJ/cm^2, as shown by Yasuyanagi et al. for the overall curing process of Kannurpatti, such light sorce being successfully used by Yasuyanagi for curing a photosensitive layer of a flexographic printing plate.

The specification of the instant application teaches an exposure with a radiation from a metal halide lamp with 4,000mJ/cm^2 in air. The illuminance at the surface of the resin is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter (see page 69).

Kannurpatti et al. do not mention a specific environment for the curing of the photopolymerizable layer. Therefore, it is the examiner's position that the curing step is performed in the air.

As the light source of Kannurpatti modified by Yasunagi has the same exposure intensity of 4000 mJ/cm^2, the exposure for curing is performed in the air and there is no record to the contrary, it is the examiner's position that the illuminance of light at the surface of the elastomeric layer/photosensitive layer of Kannurpatti modified by

Yasunagi is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter.

"[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.,* 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). (MPEP 2112.I. SOMETHING WHICH IS OLD DOES NOT BECOME PATENTABLE UPON THE DIS-COVERY OF A NEW PROPERTY)

The values of the illuminance measured with UV-35 and UV-25 filters meet the limitations of claims 12-13 for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 350 nm and for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 250 nm.

With regard to claim 14, Kannurpatti et al. teach that the thickness of photopolymerizable layer is between 0.04 to 0.72 cm (0.4 to 7.2 mm) (par.0026), which is within the range of the instant application.

With regard to claim 15, Kannurpatti et al. further disclose that the laser engravable printing element may be treated to remove surface tackiness after the laser engraving and a suitable treatment is the exposure to radiation sources having a wavelength not longer than 300 nm (par.0037).

However, Kannurpatti et al. do not specifically teach the light of the instant application.

Yatsuyanagi et al. teach a photosensitive composition suitable for production of flexographic printing plates (abstract). For the production of flexographic printing plates,

films of photosensitive composition are formed by pressing on a substrate and they are over-all exposed to UV light at 4,000 mJ/cm^2 to convert them to cured films (column 12, lines 8-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a source of UV light at 4,000 mJ/cm^2, as shown by Yasuyanagi et al. for the overall curing process of Kannurpatti, such light sorce being successfully used by Yasuyanagi for curing a photosensitive layer of a flexographic printing plate.

The specification of the instant application teaches an exposure with a radiation from a metal halide lamp with 4,000mJ/cm^2 in air. The illuminance at the surface of the resin is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter (see page 69).

Kannurpatti et al. do not mention a specific environment for the curing of the photopolymerizable layer. Therefore, it is the examiner's position that the curing step is performed in the air.

As the light source of Kannurpatti modified by Yasunagi has the same exposure intensity of 4000 mJ/cm^2, the exposure for curing is performed in the air and there is no record to the contrary, it is the examiner's position that the illuminance of light at the surface of the elastomeric layer/photosensitive layer of Kannurpatti modified by Yasunagi is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter. (MPEP 2112)

The values of the illuminance measured with UV-35 and UV-25 filters meet the limitations of claim 15 for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 350 nm and for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 250 nm.

With regard to claim 16, Kannurpatti et al. do not mention a specific environment for the curing of the photopolymerizable layer. Therefore, it is the examiner's position that the curing step is performed in the air.

With regard to claim 17, Kannurpatti et al. do not specifically disclose a temperature of the cured photopolymerizable layer. Therefore, it is the examiner's position that the temperature is ambient temperature, which is within the range of -50°C to 150°C of the instant application.

With regard to claim 19, Kannurpatti et al. teach that the photopolymerizable layer composition is pressed into plates (par.0041), which is equivalent to the photosensitive resin composition solid at 20°C of the instant application.

With regard to claim 20, Kannurpatti et al. disclose that the elastomeric composition is subjected to overall exposure to actinic radiation to effect photohardening in depth prior to laser engraving (par.0031).

As Kannurpatti et al. teach "overall exposure", it is the examiner's position that this leads to a seamless cured layer.

With regard to claim 22, Kannurpatti et al. disclose a flexographic printing plate (abstract).

7. Claims 12-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US Pg-Pub 2004/0157162) in view of Yasuyanagi et al. (US Patent 5,362,604).

With regard to claims 12-13, Yokota et al. teach a process of making a laser engravable printing element, wherein said process comprising the steps of:

- shaping the photosensitive resin composition into a sheet or a cyclinder, and

- crosslink-curing the photosensitive resin composition by light or electron beam irradiation (par.0041-0043).

In the laser engraving process, a relief pattern in formed on the printing element (par.0118). This step is equivalent to the step of "adjusting a thickness of the cured photosensitive resin layer and shaping a surface of the cured photosensitive resin layer: of the instant application.

Yokota et al. disclose that the crosslink-curing of the photosensitive resin composition may be performed with UV light (par.0090) which encompasses the range of 200-450 nm of the instant application.

However, Yokota et al. but fail to specifically teach the light of the instant application.

Yatsuyanagi et al. teach a photosensitive composition suitable for production of flexographic printing plates (abstract). For the production of flexographic printing plates, films of photosensitive composition are formed by pressing on a substrate and they are over-all exposed to UV light at 4,000 mJ/cm^2 to convert them to cured films (column 12, lines 8-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a source of UV light at 4,000 mJ/cm^2, as shown by Yasuyanagi et al. for the overall curing process of Yokota, such light source being successfully used by Yasuyanagi for curing a photosensitive layer of a flexographic printing plate.

The specification of the instant application teaches an exposure with a radiation from a metal halide lamp with 4,000mJ/cm^2 in air. The illuminance at the surface of the resin is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter (see page 69).

Yokota et al. do not mention a specific environment for the curing of the photopolymerizable layer. It is the examiner's position that the curing step is performed in the air.

As the light source of Yokota modified by Yasunayagi has the same exposure intensity of 4000 mJ/cm^2, the exposure for curing is performed in the air and there is no record to the contrary, it is the examiner's position that the illuminance of light at the surface of the elastomeric layer/photosensitive layer of Yokota modified by Yasuyanagi is 100mW/cm^2 when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter. (MPEP 2112)

The values of the illuminance measured with UV-35 and UV-25 filters meet the limitations of claims 12-13 for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 350 nm and

for the illuminance measured using a UV meter configured with a filter which transmits light with a relative spectral sensitivity peak at 250 nm.

With regard to claim 18, Yokota et al. teach that the photosensitive resin composition comprises a resin which is a fluid at 20^{o}C (see Table 4 in par.0166).

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kannurpatti et al. (US Pg-Pub 2002/0123003) in view of Yatsuyanagi et al. (US Patent 5,362,604) as applied to claim 12 and in further view of Wally et al. (US Patent 4,641,958).

With regard to claim 21, Kannurpatti modified by Yatsuyanagi teach the process of claim 12 (see paragraph 6 above) but fail to teach a lens or optical mirror for collecting light between the light source and the photosensitive layer.

Wally et al. teach a system for the imaging of printing plates (abstract) which comprises the lens system (42) and the projection lens (48) (fig.2 and column 3, lines 28-29 and 42-43).

As Wally et al. shows that an imaging system comprising lens may be used for the exposure of printing plates, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an exposure system with lens for the process of Kannurpatti modified by Yatsuyanagi, with a reasonable expectation of success.

Response to Arguments

9. Applicant's arguments, see the pages 6-11 of the remarks, filed on March 06, 2009, with respect to:

- the rejection of claims 12, 14, 15, 18 and 20 under 35 USC 102(b) over Ogata et al (JP 2003-241397),

- the rejection of claims12, 13, 22 and 23 under 35 USC 102(e) over Kannurpatti et al. (US Pg-Pub 2002/0213003), and

- the rejection of claims 12, 14, 16, 17, 19, 22 and 23 under 35 USC 102(e) over Yokota et al. (US Patent 7,029,825) have been fully considered and are persuasive.

Therefore, the above-mentioned rejections have been withdrawn. However, upon further consideration, new grounds of rejection are made in paragraphs 3-8 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. E./
Examiner, Art Unit 1795

/Cynthia H Kelly/
Supervisory Patent Examiner, Art Unit 1795